

Human Thrombomodulin ELISA Kit ab214029

リコンビナント SimpleStep ELISA

3 References [画像数 10](#)

製品の概要

製品名 Human Thrombomodulin ELISA Kit

検出方法 Colorimetric

再現性 Intra-Assay (同時再現性)

サンプル	N	平均値	SD	CV%
Human serum	8			3.1%

Inter-Assay (日差再現性)

サンプル	N	平均値	SD	CV%
Human serum	3			9.4%

サンプルの種類 Cell culture supernatant, Urine, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma

アッセイタイプ Sandwich (quantitative)

検出感度 3 pg/ml

検出範囲 20.3 pg/ml - 1300 pg/ml

添加回収試験 特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Cell culture supernatant	90	88% - 91%
Urine	106	102% - 112%
Serum	97	96% - 99%
Cell culture extracts	94	92% - 96%
Tissue Extracts	105	101% - 110%
Hep Plasma	99	98% - 100%

サンプルの種類	平均 %	測定範囲
EDTA Plasma	96	94% - 98%
Cit plasma	96	92% - 98%

全工程の試験時間

1h 30m

ステップ

One step assay

種交差性

交差種: Human

非交差種: Cow

製品の概要

Human Thrombomodulin ELISA Kit (ab214029) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Thrombomodulin protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, serum, urine, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Thrombomodulin with 3 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

特記事項

Human Thrombomodulin is a 557 amino acid type I transmembrane protein, consisting of six epidermal growth factor (EGF)-like domains and is highly glycosylated. Thrombomodulin is an important component in the anti-coagulation system by functioning as a cell surface receptor for thrombin, and has also been shown to play a role in anti-inflammation, cell adhesion, and proliferation. The Thrombomodulin - thrombin complex activates protein C and thrombin-activatable fibrinolysis inhibitor (TAFI); protein C degrades coagulation factors Va and VIIIa, which regulates thrombin resulting in inhibition of coagulation. The extracellular portion of Thrombomodulin has been shown to be released from the cell surface due to protein cleavage during vascular endothelial cell injury.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

試験プラットフォーム

Pre-coated microplate (12 x 8 well strips)

製品の特性

保存方法

Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 20ml
20X Human Thrombomodulin Detector Antibody	1 x 300µl
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml
Human Thrombomodulin Capture Antibody (Lyophilized)	1 vial
Human Thrombomodulin Lyophilized Recombinant Protein (ab98989)	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

機能

Thrombomodulin is a specific endothelial cell receptor that forms a 1:1 stoichiometric complex with thrombin. This complex is responsible for the conversion of protein C to the activated protein C (protein Ca). Once evolved, protein Ca scissions the activated cofactors of the coagulation mechanism, factor Va and factor VIIIa, and thereby reduces the amount of thrombin generated.

組織特異性

Endothelial cells are unique in synthesizing thrombomodulin.

関連疾患

Defects in THBD are the cause of thrombophilia due to thrombomodulin defect (THR-THBD) [MIM:188040]. A hemostatic disorder characterized by a tendency to thrombosis.

Defects in THBD are a cause of susceptibility to hemolytic uremic syndrome atypical type 6 (AHUS6) [MIM:612926]. An atypical form of hemolytic uremic syndrome. It is a complex genetic disease characterized by microangiopathic hemolytic anemia, thrombocytopenia, renal failure and absence of episodes of enterocolitis and diarrhea. In contrast to typical hemolytic uremic syndrome, atypical forms have a poorer prognosis, with higher death rates and frequent progression to end-stage renal disease. Note=Susceptibility to the development of atypical hemolytic uremic syndrome can be conferred by mutations in various components of or regulatory factors in the complement cascade system. Other genes may play a role in modifying the phenotype.

配列類似性

Contains 1 C-type lectin domain.

Contains 6 EGF-like domains.

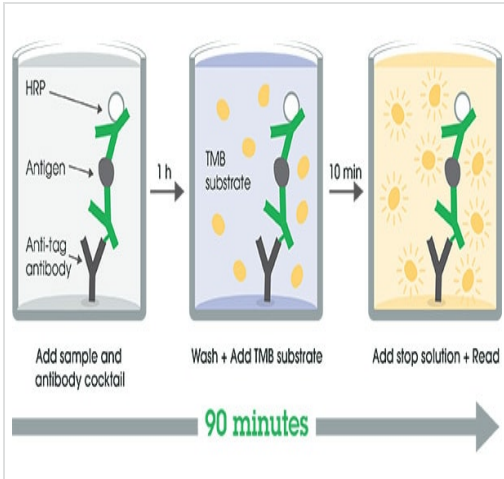
翻訳後修飾

N-glycosylated.

The iron and 2-oxoglutarate dependent 3-hydroxylation of aspartate and asparagine is (R) stereospecific within EGF domains.

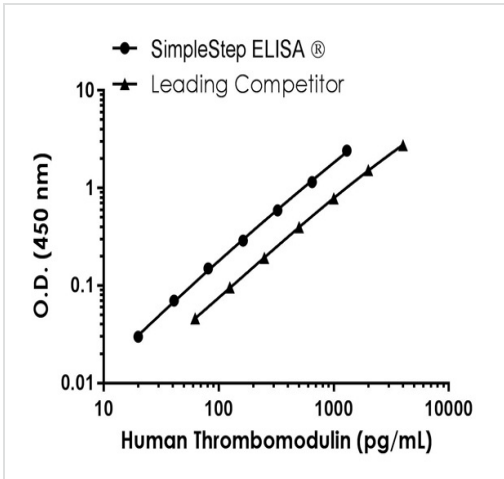
細胞内局在

Membrane.



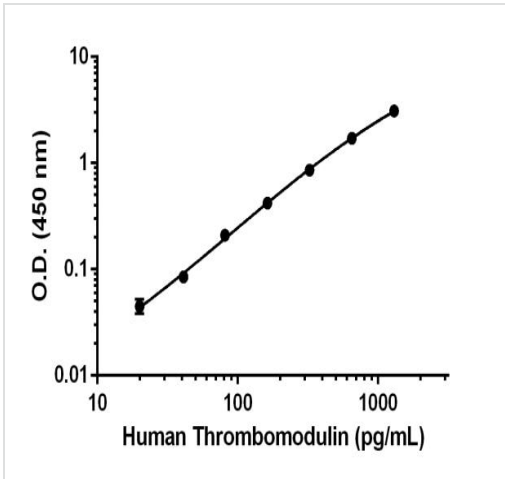
Other - Human Thrombomodulin ELISA Kit (ab214029)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



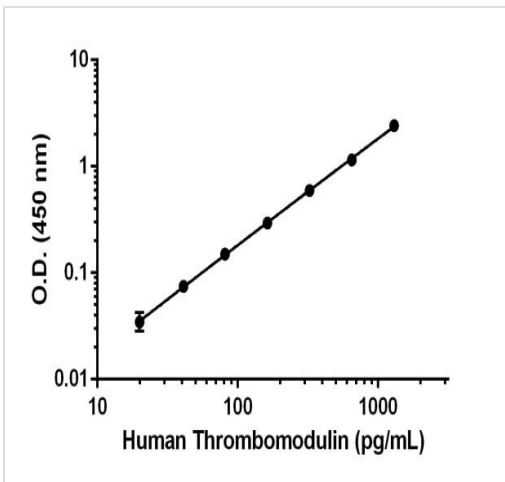
Human Thrombomodulin standard curve comparison data.

Standard curve comparison between human Thrombomodulin SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows a 8-fold increase in sensitivity.



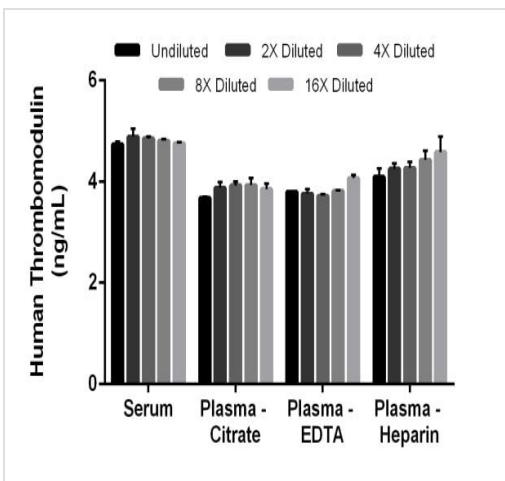
Example of Human Thrombomodulin standard curve in Sample Diluent NS.

Background-subtracted data values (mean +/- SD) are graphed.



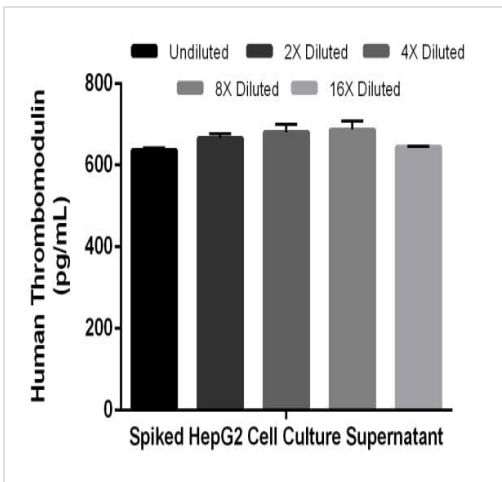
Example of Human Thrombomodulin standard curve in 1X Cell Extraction Buffer PTR.

Background-subtracted data values (mean +/- SD) are graphed.



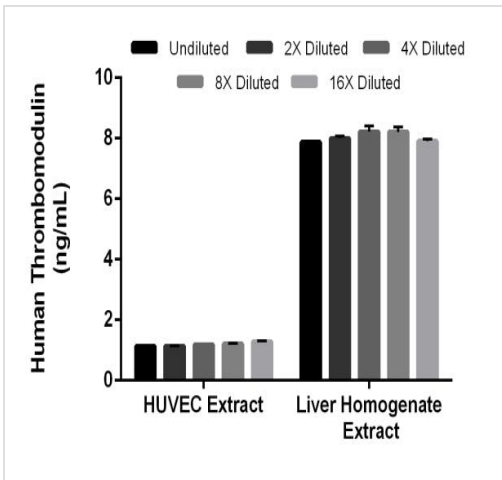
Interpolated concentrations of native Thrombomodulin in human serum, and plasma samples.

The concentrations of Thrombomodulin were measured in duplicate, interpolated from the Thrombomodulin standard curve and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 25%, plasma (EDTA) 25% and plasma (heparin) 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Thrombomodulin concentration was determined to be 4.8 ng/mL in serum, 3.9 ng/mL in plasma (citrate), 3.8 ng/mL in plasma (EDTA) and 4.3 ng/mL in plasma (heparin).



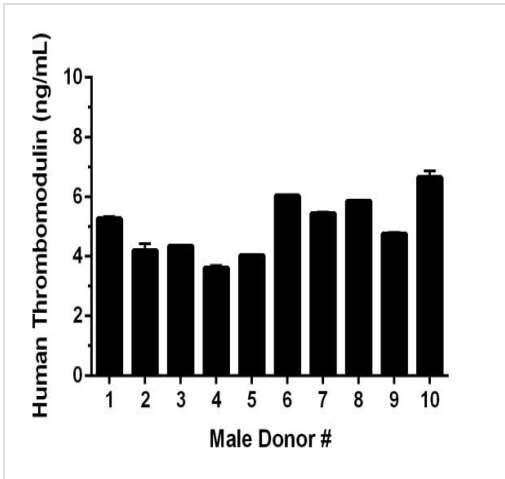
Interpolated concentrations of spiked recombinant Thrombomodulin in HepG2 cell culture supernatant samples.

The concentrations of Thrombomodulin were measured in duplicate, interpolated from the Thrombomodulin standard curve and corrected for sample dilution. Undiluted sample is at 45%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The native Thrombomodulin concentration was undetectable in the null spike control run in parallel with the spiked sample.



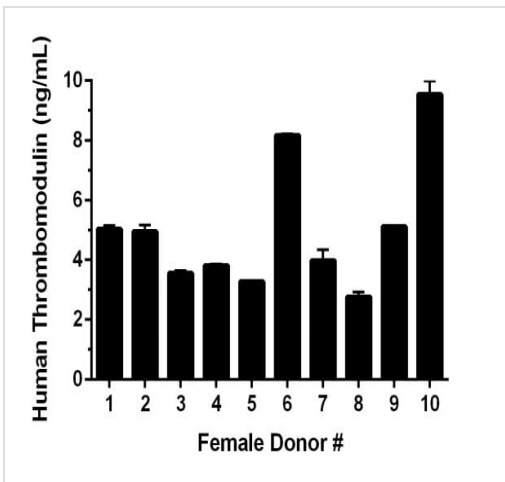
Interpolated concentrations of native Thrombomodulin in HUVEC and human liver homogenate extracts based on a 1,000 µg/mL extract load.

The concentrations of Thrombomodulin were measured in duplicate and interpolated from the Thrombomodulin standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Thrombomodulin concentration was determined to be 1.2 ng/mL in HUVEC extract and 8.0 ng/mL in liver homogenate extract.



Serum from ten individual healthy human male donors was measured in duplicate.





Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Thrombomodulin concentration was determined to be 5.1 ng/mL with a range of 3.6 – 6.8 ng/mL.



Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean target concentration was determined to be 5.1 ng/mL with a range of 2.7 – 9.9 ng/mL.

Powered by recombinant antibodies

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Sandwich ELISA - Human Thrombomodulin ELISA Kit (ab214029)

To learn more about the advantages of recombinant antibodies see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.co.jp/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors